

Appl. No. 09/176,639

Reply to Office action of September 22, 2004

**REMARKS**

Claims 16, 21-40, 42-50 and 52-63 are currently pending in the application. Applicants request reconsideration of the application in light of the following remarks.

**Rejections under 35 U.S.C. § 103**

To establish a prima facie case of obviousness under 35 U.S.C. § 103, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based upon the Applicants' disclosure. A failure to meet any one of these criteria is a failure to establish a prima facie case of obviousness. MPEP §2143.

Claims 16-25 and 27-51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Grabner et al (U.S. Patent No. 4,731,694), in view of Miller et al (U.S. Patent No. 5,374,787). As to independent claim 16, the Examiner stated that Grabner disclosed a touch pad system comprising a sensor layer and an insulative layer (citing FIG. 1 items 7, 8 and 24, and column 3 lines 20-22, 31-61 and column 4, lines 26-30.) The Examiner noted that in one special embodiment of the touch pad the insulative layer 24 also comprises a metallized layer as a conductor on an upper flat surface. The Examiner then admitted that Grabner does not disclose the touch layer having a conductivity selected to create an electrical image of a conductive object that is larger than an area of contact of said conductive object contacting said touch layer. However, the Examiner then stated that Miller discloses, in column 8, line 58 to column 9, line 25, a touch layer having a conductivity selected to create an image of a conductive object that is larger than an area of contact of said conductive object, and wherein said sensor layer capacitively detects the image of said conductive object when a user places a

conductive object proximate said touch layer. The Examiner then concluded that it would be have been obvious for one of ordinary skill in the art to combine the references.

Applicants respectfully disagree, and submit that the Examiner has mischaracterized the Miller reference. As stated above, the Examiner alleged that Miller teaches a touch layer "having a conductivity selected to create an image of a conductive object that is larger than an area of contact of said conductive object". This is a mischaracterization of the Miller reference. Instead, Miller specifically teaches an **insulative** touch layer. See column 8, lines 58-60 and FIG. 1D, where Miller teaches "An **insulating layer 24** is disposed over the sense pads 22 on the top surface 16 to **insulate** a human finger or other object therefrom" (emphasis added). Note that FIG. 1D clearly shows the insulating layer 24 on top the device. Thus, insulating layer 24 would clearly comprise the touch layer of the device. Any conductive elements described by Miller are in the underlying sensor layers, and would not be touched and thus not be part of any "touch layer".

Miller also fails to teach creating an "image larger than an area of contact". Instead Miller at best teaches an image that corresponds to the outline of the finger. See also column 9, line 21-25, where Miller teaches "The position sensor according to this embodiment of the invention will also report a Z value proportional to the **outline of that finger** and hence indicative of the pressure with which the finger contacts the surface of the insulating layer 24 over the sensor array 10" (emphasis added).

Thus, Miller clearly teaches an insulative touch layer. Miller likewise fails to teach a touch layer having any specified conductivity. Furthermore, it fails to teach the conductivity selected to create an "image larger than an area of contact". For all these reasons, we submit that the Examiner has mischaracterized the references and failed to establish a prima facie case of obviousness.

Applicants thus submit that claim 16 is patentably distinct over the cited combination of references. Claim 37 likewise recites a touch pad system with a conductive touch layer

configured to create an image to increase the detected change in capacitance. As discussed above, the cited combination of references fails to teach a touch pad that includes such a conductive touch layer. Thus, independent claim 37 is patentably distinct over the cited references.

Claim 42 likewise recites a touch pad system with a conductive touch layer configured to create an image that increases the detected change in capacitance. As discussed above, the cited combination of references fails to teach a touch pad that includes such a conductive touch layer. Thus, amended independent claim 42 is patentably distinct over the cited references.

Claim 52 likewise recites that the "conductive touch layer has a conductivity selected to create an image of said conductive object that is larger than an area of contact of said conductive object to thereby increase the capacitance of the formed capacitor and facilitate sensing of the capacitance to determine a position of the conductive object." As discussed above, the cited combination of references fails to teach a touch pad that includes any such conductive touch layer. Thus, independent claim 52 is patentably distinct over the cited references.

Thus, applicants submit that independent claims 16, 37, 42, and 52 are patentably distinct over the cited references. Furthermore, as claims 21-36, 38-40, 53-50, and 53-61 depend from, and include all the limitations of their respective independent claims, they are also submitted to be patentably distinct over the cited references. Furthermore, the independent and dependent claims include various other limitations that are not found in the cited references.

For example, with regard to claims 25, and 54, the claims recite a touch layer formed with a "conductive material disposed in a plastic carrier". In the office action, the Examiner stated that Miller discloses a plastic carrier in column 8, lines 8-57. Again, applicants disagree. Applicants note that any conductive elements recited in column 8, lines 8-57 of Miller reside in

the inner sensor layers of the device, and not in a "touch layer". Again, the top layer, or touch layer is described only as insulating layer 24. See column 8, lines 58-60 and FIG. 1D of Miller. Thus, applicants submit that claims 25 and 54 are patentably distinct over the cited references.

As another example, with regard to claims 39, 40 and 60, the claims recite various means and methods for distinguishing an identity of a conductive object. In the office action the Examiner alleged that these features were found in Miller, citing column 8, lines 58-column 9, line 25. Applicants submit that no such features are found in the cited Miller reference. For example, claim 39 recites a means based on the detected change in capacitance, wherein said detected change in capacitance is variable over a time period for a finger proximate said conductive touch layer and said detected change in capacitance is substantially constant over a time period for a stylus contacting said conductive touch layer. Likewise, claim 40 recites a means based on a rate of change of the detected change in capacitance, wherein a stylus produces an immediate full strength detected change in capacitance upon contacting said conductive touch layer and a finger produces a gradually increasing detected change in capacitance as said finger approaches contacting said conductive touch layer. Finally, claim 60 recites that the system is configured to distinguish an identity of the conductive object by determining a change in the capacitance over a selected time period when the conductive objective is positioned proximate the conductive touch layer, wherein the a variable change in capacitance over the selected time period corresponds to a finger determination and a substantially constant capacitance over the selected time period corresponds to a stylus determination. Applicants submit that none of these recited limitations are found in the Miller reference.

Applicants note that the Examiner has allowed claim 63, and has stated that claim 24 would be allowable if rewritten in independent form. Applicants have chosen not to rewrite claim 24 at this time in favor of the arguments for patentability made above.

In summary, and in view of the amendments herein, none of the references cited by the Examiner nor any other known prior art, either alone or in combination, disclose the unique combination of features disclosed in applicant's claims presently on file. For this reason, allowance of all of applicant's claims is respectfully solicited.

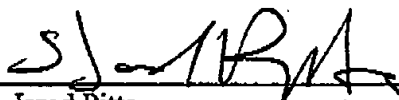
### **CONCLUSION**

If any fees, including extension of time fees or additional claims fees, are due as a result of this response, please charge Ingrassia Fisher & Lorenz Deposit Account No. 50-2091. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. The Examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,  
**INGRASSIA FISHER & LORENZ**

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Customer No. 29,906

By:   
S. Jared Pitts  
Reg. No. 38,579  
(480) 385-5060